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(54) Title: MASK REPAIR WITH ELECTRON BEAM-INDUCED CHEMICAL ETCHING

(57) Abstract: The present invention discloses a method of fabricating and repairing a mask without damage and an apparatus including a holder to mount a substrate; a stage to position the holder in a chamber; a pumping system to evacuate the chamber; an imaging system to locate an opaque defect in the substrate; a gas delivery system to dispense a reactant gas towards the defect; and an electron delivery system to direct electrons towards the opaque defect.

## INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G03F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, IBM-TDB

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 482 802 A (CELLER ET AL.) 9 January 1996 (1996-01-09) column 2, line 28-47 column 3, line 8-10; claims 1-10; figure 3 column 5, line 46-54	1-17
Y	US 6 038 015 A (KAWATA) 14 March 2000 (2000-03-14) see abstract claims 1,18,26	1-17
Y	EP 0 334 680 A (CANON KABUSHIKI KAISHA) 27 September 1989 (1989-09-27) claims 1-4,6	1-17
A	US 6 114 073 A (YANG) 5 September 2000 (2000-09-05) claims 1,15,32,40	1-17
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Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 298 495 A (HITACHI, LTD.) 11 January 1989 (1989-01-11) see abstract claim 1	1-17
A	US 4 256 778 A (MIZUKAMI ET AL.) 17 March 1981 (1981-03-17) the whole document	1-17

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Information on patent family members

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